



# Aviation Investigation Final Report

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<b>Location:</b>	Loxahatchee, Florida	<b>Accident Number:</b>	ERA22FA160
<b>Date &amp; Time:</b>	March 18, 2022, 14:32 Local	<b>Registration:</b>	N650AG
<b>Aircraft:</b>	MD HELICOPTERS INC 369	<b>Aircraft Damage:</b>	Substantial
<b>Defining Event:</b>	Controlled flight into terr/obj (CFIT)	<b>Injuries:</b>	2 Fatal
<b>Flight Conducted Under:</b>	Part 91: General aviation - Personal		

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## Analysis

The pilot held a commercial pilot certificate with airplane ratings but did not possess a helicopter rating at the time of the accident. He did have a logbook endorsement for solo student flight with helicopters with the prohibition of carrying passengers. The passenger was a pilot-rated for single-engine land airplanes and did not have any helicopter experience.

According to automatic dependent surveillance-broadcast data, the helicopter departed an airport and flew north over swampy, state land. The data further showed the helicopter flying at altitudes from 25 to 75 ft above ground level (agl) and at speeds between 83 to 100 knots before colliding with high-voltage power lines. The helicopter came to rest in a swampy field about 250 ft from the power lines. The power lines were measured at 80 ft agl. Examination of the wreckage did not reveal any preimpact mechanical malfunctions. The circumstances of the accident are consistent with the pilot's failure to maintain clearance from power lines while maneuvering at low altitude.

## Probable Cause and Findings

The National Transportation Safety Board determines the probable cause(s) of this accident to be:

The pilot's failure to maintain clearance from power lines while maneuvering at low altitude.

## Findings

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<b>Aircraft</b>	Altitude - Not attained/maintained
<b>Personnel issues</b>	Decision making/judgment - Pilot

## Factual Information

### History of Flight

#### Maneuvering

Controlled flight into terr/obj (CFIT) (Defining event)

#### HISTORY OF FLIGHT

On March 18, 2022, at 1432 eastern daylight time, an MD Helicopters 369HM, N650AG, was destroyed after it impacted power lines near Loxahatchee, Florida. The commercial pilot and pilot-rated passenger were fatally injured. The helicopter was operated by the commercial pilot under the provisions of Title 14 *Code of Federal Regulations* Part 91 as a personal flight.

According to automatic dependent surveillance-broadcast (ADS-B) data obtained from the Federal Aviation Administration, the helicopter departed Antiquers Aerodrome (FD08), Delray Beach, Florida, about 1359 and flew north over swampy, state land. The data showed the helicopter flying at altitudes from 25 to 75 ft above ground level (agl), and at speeds between 83 to 100 knots, before colliding with high-voltage power lines. The power lines were measured at 80 ft agl. The data ended at 1432.

#### PERSONNEL INFORMATION

The pilot held a commercial pilot certificate with ratings for airplane single-engine land, airplane single-engine sea, and instrument airplane. He did not possess a rotorcraft-helicopter rating at the time of the accident. He had a logbook endorsement for solo student flight in helicopters with the prohibition of carrying passengers. The commercial pilot was issued a FAA second-class medical certificate on October 28, 2021. He reported 1,200 hours of total flight experience at that time.

The pilot-rated passenger held a private pilot certificate with a rating for airplane single-engine land and an instrument rating. The pilot-rated passenger did not have any helicopter experience.

#### WRECKAGE AND IMPACT INFORMATION

The wreckage was located in a swampy field. Power lines were observed on the ground near the wreckage. The wreckage path began where the power lines were located and continued for about 250 ft on a 270° magnetic course. The wreckage was laying on its right side and oriented about a 320° heading. The skids were separated from the helicopter, and all four main rotor blades were fractured off the hub. One main rotor blade could not be located in the swamp. Power line impression marks were found on the landing light housing and the skid brackets. The tail rotor was located about 30 ft from the main wreckage. Parts from the engine

cowling, tail section and engine were found scattered in the wreckage path. The instrument panel was intact. Examination of the engine and airframe did not reveal any preimpact mechanical malfunctions.

The maintenance logbooks could not be located.

## MEDICAL AND PATHOLOGICAL INFORMATION

Toxicology testing performed by the FAA's Forensic Services Laboratory did not reveal any evidence of drugs or alcohol.

An autopsy was performed on the pilot by the Office of the Medical Examiner, District 15, West Palm Beach, Florida. The report listed the cause of death as multiple blunt force injuries.

### Pilot Information

<b>Certificate:</b>	Commercial	<b>Age:</b>	65, Male
<b>Airplane Rating(s):</b>	Single-engine land; Single-engine sea	<b>Seat Occupied:</b>	Right
<b>Other Aircraft Rating(s):</b>	None	<b>Restraint Used:</b>	3-point
<b>Instrument Rating(s):</b>	Airplane	<b>Second Pilot Present:</b>	No
<b>Instructor Rating(s):</b>	None	<b>Toxicology Performed:</b>	Yes
<b>Medical Certification:</b>	Class 2 With waivers/limitations	<b>Last FAA Medical Exam:</b>	October 28, 2021
<b>Occupational Pilot:</b>	No	<b>Last Flight Review or Equivalent:</b>	
<b>Flight Time:</b>	1200 hours (Total, all aircraft)		

## Aircraft and Owner/Operator Information

<b>Aircraft Make:</b>	MD HELICOPTERS INC	<b>Registration:</b>	N650AG
<b>Model/Series:</b>	369 HM	<b>Aircraft Category:</b>	Helicopter
<b>Year of Manufacture:</b>	1971	<b>Amateur Built:</b>	
<b>Airworthiness Certificate:</b>	Normal	<b>Serial Number:</b>	1090203M
<b>Landing Gear Type:</b>	Skid	<b>Seats:</b>	4
<b>Date/Type of Last Inspection:</b>	Unknown	<b>Certified Max Gross Wt.:</b>	
<b>Time Since Last Inspection:</b>		<b>Engines:</b>	1 Turbo shaft
<b>Airframe Total Time:</b>		<b>Engine Manufacturer:</b>	Rolls Royce
<b>ELT:</b>	C126 installed, not activated	<b>Engine Model/Series:</b>	
<b>Registered Owner:</b>	On file	<b>Rated Power:</b>	
<b>Operator:</b>	On file	<b>Operating Certificate(s) Held:</b>	None

## Meteorological Information and Flight Plan

<b>Conditions at Accident Site:</b>	Visual (VMC)	<b>Condition of Light:</b>	Day
<b>Observation Facility, Elevation:</b>	KPBI, 21 ft msl	<b>Distance from Accident Site:</b>	15 Nautical Miles
<b>Observation Time:</b>	14:53 Local	<b>Direction from Accident Site:</b>	133°
<b>Lowest Cloud Condition:</b>	Few / 2500 ft AGL	<b>Visibility:</b>	10 miles
<b>Lowest Ceiling:</b>		<b>Visibility (RVR):</b>	
<b>Wind Speed/Gusts:</b>	12 knots /	<b>Turbulence Type Forecast/Actual:</b>	None / None
<b>Wind Direction:</b>	140°	<b>Turbulence Severity Forecast/Actual:</b>	N/A / N/A
<b>Altimeter Setting:</b>	30.04 inches Hg	<b>Temperature/Dew Point:</b>	29°C / 20°C
<b>Precipitation and Obscuration:</b>	No Obscuration; No Precipitation		
<b>Departure Point:</b>	Delary Beach, FL (FD08)	<b>Type of Flight Plan Filed:</b>	None
<b>Destination:</b>	Delary Beach, FL (FD08)	<b>Type of Clearance:</b>	None
<b>Departure Time:</b>	13:58 Local	<b>Type of Airspace:</b>	Class G

## Wreckage and Impact Information

<b>Crew Injuries:</b>	1 Fatal	<b>Aircraft Damage:</b>	Substantial
<b>Passenger Injuries:</b>	1 Fatal	<b>Aircraft Fire:</b>	None
<b>Ground Injuries:</b>		<b>Aircraft Explosion:</b>	None
<b>Total Injuries:</b>	2 Fatal	<b>Latitude, Longitude:</b>	26.853657,-80.30003(est)

## Administrative Information

<b>Investigator In Charge (IIC):</b>	Boggs, Daniel
<b>Additional Participating Persons:</b>	Rick Beckstrom; FAA/FSDO; South Florida, FL Jon Michael; Rolls_Royce; Indianapolis, IN Joan Gregoire; MD Helicopters; Mesa, AZ
<b>Original Publish Date:</b>	September 20, 2023
<b>Last Revision Date:</b>	
<b>Investigation Class:</b>	<a href="#">Class 3</a>
<b>Note:</b>	
<b>Investigation Docket:</b>	<a href="https://data.nts.gov/Docket?ProjectID=104799">https://data.nts.gov/Docket?ProjectID=104799</a>

The National Transportation Safety Board (NTSB) is an independent federal agency charged by Congress with investigating every civil aviation accident in the United States and significant events in other modes of transportation—railroad, transit, highway, marine, pipeline, and commercial space. We determine the probable causes of the accidents and events we investigate, and issue safety recommendations aimed at preventing future occurrences. In addition, we conduct transportation safety research studies and offer information and other assistance to family members and survivors for each accident or event we investigate. We also serve as the appellate authority for enforcement actions involving aviation and mariner certificates issued by the Federal Aviation Administration (FAA) and US Coast Guard, and we adjudicate appeals of civil penalty actions taken by the FAA.

The NTSB does not assign fault or blame for an accident or incident; rather, as specified by NTSB regulation, “accident/incident investigations are fact-finding proceedings with no formal issues and no adverse parties ... and are not conducted for the purpose of determining the rights or liabilities of any person” (Title 49 *Code of Federal Regulations* section 831.4). Assignment of fault or legal liability is not relevant to the NTSB’s statutory mission to improve transportation safety by investigating accidents and incidents and issuing safety recommendations. In addition, statutory language prohibits the admission into evidence or use of any part of an NTSB report related to an accident in a civil action for damages resulting from a matter mentioned in the report (Title 49 *United States Code* section 1154(b)). A factual report that may be admissible under 49 *United States Code* section 1154(b) is available [here](#).